AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1.   (Previously presented) A method for providing proxy services in a network of modules included in a work machine environment, the method performed by a gateway and comprising:

detecting a first message sent by a source module on a first data link, wherein the first message is directed to a destination module and includes an address identifier corresponding to the destination module;

retrieving the first message and extracting the destination address identifier from the message; and

routing, based on the destination address and an address map including proxy logic identifiers, the first message to a proxy logic element in the gateway that performs functions associated with the destination module based on data included in the first message.

2.   (Original)   The method of claim 1, wherein detecting a first message on a first data link comprises detecting a first message sent by a source module on a proprietary data link.

3.   (Original)   The method of claim 1, further comprising:

providing the first message from the proxy logic element to a second module over a second data link interfaced by the proxy logic element.

4.   (Currently amended)   The method of claim 3, further comprising:

receiving a second message responsive to the first message from the second module via the second data link; and

routing the second message to the ~~first~~destination module over the first data link via the address map.

5.   (Original)   The method of claim 4, further comprising:

detecting that the first data link is incompatible with the second data link; and

translating the second message into a comparable message consistent with the first data link.

6.   (Original)   The method of claim 1, further comprising:

generating, by the proxy logic element, a second message that is responsive to the first message and routing the second message to the source module via the first data link.

7.   (Canceled)

8.   (Previously presented) A method for providing proxy services in a network of modules included in a work machine environment, the method performed by a gateway and comprising:

monitoring a first data link for messages, wherein the messages are transmitted

by source nodes and intended for destination modules;

determining whether a first message intended for a first destination module

should be intercepted from the first data link based on a destination address included in

the first message;

intercepting the first message when the gateway determines that the message

should be intercepted; and

routing, based on information in an address map, the first message to a proxy

logic element in the gateway that performs functions associated with the first destination

module based on data included in the first message.

9.   (Original) The method of claim 8, wherein the source nodes include at

least one of either an on-board module and an off-board system.

10.   (Previously presented) A proxy control module in a work machine, the

proxy module comprising:

means for monitoring a first data link connected to a plurality of modules, each

module configured to direct messages to destination modules by adding to the

messages an address identifier corresponding to the destination modules;

means for intercepting at least one of the messages based on a determination

that the at least one message is intended for a destination module for which the

gateway serves as a proxy; and

means for selectively providing, using an address map, the at least one message to program logic in the proxy control module that performs, based on data included in the at least one message, work machine control functions similar to the destination module that may be connected to the first data link to perform the same functions.

11.   (Previously presented) A proxy control module in a work machine, the proxy module comprising:

means for monitoring a first data link connected to a plurality of modules, each module configured to direct messages to destination modules by adding to the messages an address identifier corresponding to the destination modules;

means for determining whether the messages include respective address identifiers that correspond to address identifiers included in an address map;

means for intercepting at least one of the messages based on a determination that the at least one message includes an address identifier that corresponds to an address identifier in the address map; and

means for selectively providing, using an address map, the at least one message to program logic in the proxy control module that performs, based on data included in the at least one message, work machine control functions similar to the destination module that may be connected to the first data link to perform the same functions.

12.   (Previously presented)   A system for exchanging information in a work machine environment having a network of modules, the system comprising:

a source module for broadcasting a first message over a first data link that uses

a first protocol, wherein the first message is intended for a destination module and

includes a destination address identifier associated with the destination module; and

a gateway coupled to the first data link and configured to:

monitor the first data link for messages,

intercept the first message from the first data link based on a determination that

the destination address corresponds to proxy logic included in the gateway, and

route the intercepted message, based on information in an address map, to the

proxy logic, wherein the proxy logic performs functions associated with the destination

module based on data included in the intercepted message.

13.   (Original)   The system of claim 12, wherein the first data link is a

proprietary data link.

14.   (Original)   The system of claim 12, further comprising a second data

link that interfaces the proxy logic element.

15.   (Original)   The system of claim 14, wherein the gateway is further

configured to transmit information responsive to the first message from the proxy logic

element over the second data link.

16.   (Original)   The system of claim 14, wherein the gateway is further configured to receive a second message from the second data link and route, using the address map, the second message over the first data link to the source module.

17.   (Original)   The system of claim 16, wherein the second data link is a non-proprietary standard data link including one of 31939, CAN, MODBUS, serial standard data link, and the Ethernet.

18.   (Original)   The system of claim 17, wherein the gateway is further configured to translate the second message into a comparable message consistent with the first data link.

19.   (Previously presented)   A system for exchanging information in a work machine environment having a network of modules, the system comprising:

a source module for broadcasting a first message over a first data link that uses a first protocol, wherein the first message is intended for a destination module and includes a destination address identifier associated with the destination module; and

a gateway coupled to the first data link and configured to:

monitor the first data link for messages,

retrieve the first message from the first data link,

extract the destination address identifier from the first message, search an address map for the destination address included in the first message, and

when the destination address is found in the address map, route, based on

information in the address map, the first message to a proxy logic element that performs

functions associated with the destination module based on data included in the first

message, wherein the proxy logic element is located in the gateway.

20.   (Original)   The system of claim 19, wherein the first data link is a

proprietary data link.

21.   (Original)   The system of claim 19, further comprising a second data

link that interfaces the proxy logic element.

22.   (Original)   The system of claim 21, wherein the gateway is further

configured to transmit information responsive to the first message from the proxy logic

element over the second data link.

23.   (Original)   The system of claim 21, wherein the gateway is further

configured to receive a second message from the second data link and route, using the

address map, the second message over the first data link to the source module.

24.   (Original)   The system of claim 23, wherein the second data link is a

non-proprietary standard data link including one of J1939, CAN, MODBUS, serial

standard data link, and the Ethernet.

25.   (Original)   The system of claim 24, wherein the gateway is further configured to translate the second message into a comparable message consistent with the first data link.

26.   (Canceled)

27.   (Previously presented) A system for exchanging information in a work machine environment, the system comprising:

a network of modules coupled to a first data link included in a work machine;

a master controller remotely located with respect to the work machine and coupled to the work machine via a wireless data link, wherein the master controller is configured to control the modules; and

a gateway included in the work machine and configured to:

monitor the first data link for messages, wherein the messages are sent by the modules and intended for the master controller,

intercept the messages from the first data link based on a determination that the messages are intended for the master controller, and

route the intercepted message, based on information in an address map, to proxy logic located in the gateway that performs functions associated with the master controller.

28.   (Previously presented) A computer-readable medium including

instructions for performing a method in a work machine environment, the method

performed by a gateway and comprising:

monitoring a first data link for messages, wherein the messages are transmitted

by source nodes and intended for destination modules;

determining whether a first message intended for a first destination module

should be intercepted from the first data link based on a destination address included in

the first message;

intercepting the first message when the gateway determines that the message

should be intercepted; and

routing, based on information in an address map, the first message to a proxy

logic element in the gateway that performs functions associated with the first destination

module based on data included in the first message.

29.   (Previously presented) A computer-readable medium including instructions for performing a method in a work machine environment, the method performed by a gateway and comprising:

monitoring a first data link connected to a plurality of modules, each module configured to direct messages to destination modules by adding to the messages an address identifier corresponding to the destination modules;

intercepting at least one of the messages based on a determination that the at least one message is intended for a destination module for which the gateway serves as a proxy; and

selectively providing, using an address map, the at least one message to program logic in the gateway that performs, based on data included in the at least one message, work machine control functions similar to the destination module that may be connected to the first data link to perform the same functions.

30.   (Currently amended) A system for processing messages in a work machine environment, comprising:

a first work machine including a first gateway and a first destination module; and

a second work machine including a second gateway and a second destination module,

wherein the first gateway is configured to:

receive a first message having an identifier that identifies thea destination module as a target for the first message, and

determine, based on the identifier, whether to process the first message with the first gateway or to route the first message from the first gateway, wherein:

when the first gateway can process the first message, it performs functions similar to those of the first destination module using data included in the first message, and

when the first gateway cannot process the first message, it routes the first message to the second gateway.

31.   (Currently amended)   The system of claim 30, wherein the second gateway is configured to:

determine, based on the identifier, whether to process the first message within the second gateway or to route the first message from the second gateway, wherein:

when the second gateway can process the first message, it performs functions similar to those of the second destination module using data included in the first message, and

when the second gateway cannot process the first message, it routes the first message to the destination modulefrom the second gateway.

32.   (Previously presented)   A method for providing proxy services in a work machine including modules interconnected by a data link and a gateway, the gateway including first program logic and second program logic serving as proxies for modules in the work machine, the method performed by the gateway comprising:

processing a message in the first program logic, wherein the message includes information identifying a destination module that is configured to perform an operation using data included in the message;

routing, based on an address map and the information included in the message, the message from the first program logic to the second program logic; and

performing, by the second program logic, the operation on the data included in the message.

33.   (Previously presented)   The method of claim 32, wherein processing the message in the first program logic includes at least one of:

generating the message by the first program logic; and

receiving by the first program logic the message from a source module.

34.   (Previously presented)   A gateway providing proxy services in a work machine including modules interconnected by a data link, the gateway comprising:

first program logic configured to perform functions associated with at least a-first one of the modules; and

second program logic configured to perform functions associated with at least a second one of the modules;

wherein the first program logic is configured to:

process a message, wherein the message includes information identifying a destination module that is configured to perform an operation using data included in the message, and

route, based on an address map and the information included in the message, the message from the first program logic to the second program logic, and

wherein the second program logic is configured to perform the operation on the data included in the message.

35.   (Previously presented)   The system of claim 34, wherein the first program logic is configured to at least one of:

generate the message; and

receive the message from a source module.

36.   (Currently amended) A method for processing messages in a work machine environment, comprising:

receiving, at a first gateway located in a first work machine, a message addressed to a destination module located in a-second work machine;

performing by the first gateway functions associated with the destination module, when the first gateway is able to process the message; and

routing the message from the first gateway to a second gateway located in thea second work machine, when the first gateway is unable to process the message.

37.   (Currently amended) The method of claim 36, further comprising:

receiving at the second gateway the message from the first gateway, if the first gateway routes the message to the second gateway;

performing by the second gateway functions associated with the destination module, when the second gateway is able to process the message; and

routing the message from the second gateway to the destination module, when the second gateway is unable to process the message.

38.   (Previously presented) A method for providing proxy services in a network of modules included in a work machine environment, the method performed by a gateway and comprising:

retrieving by the gateway a proxy logic element from a remote location;

detecting a message sent by a source module on a first data link, wherein the message is directed to a destination module and includes an address identifier corresponding to the destination module;

retrieving the first message and extracting the destination address identifier from the message; and

routing, based on the destination address identifier and an address map, the first message to a proxy logic element in the gateway that performs functions associated with the destination module.